

Title (en)

Apparatus for high-frequency electromagnetic initiation of a combustion process

Title (de)

Vorrichtung zur Hochfrequenz-Elektromagnetinitiierung eines Verbrennungsprozesses

Title (fr)

Appareil pour l'initiation électromagnétique haute fréquence d'un procédé de combustion

Publication

**EP 2366951 A2 20110921 (EN)**

Application

**EP 11158147 A 20110314**

Priority

RU 2010110031 A 20100318

Abstract (en)

Apparatus for providing electromagnetic radiation to a combustor (100) during a combustion process is disclosed. An electromagnetic radiation source (200) delivers electromagnetic radiation through a first waveguide (210) to a second waveguide that includes an electromagnetic radiation outlet (232) positioned to deliver electromagnetic radiation to the interior of the combustor (112). Electromagnetic radiation is delivered to low temperature regions of a combustor (100) to reduce carbon monoxide (CO) and unburned hydrocarbon (UHC) emissions. In addition, the electromagnetic radiation stimulates the combustion process so that lean air-fuel mixtures and low BTU gases can be burned at lower combustion temperatures leading to reduced NO X emissions.

IPC 8 full level

**F23R 3/28** (2006.01)

CPC (source: EP US)

**F23C 99/001** (2013.01 - EP US); **F23R 3/286** (2013.01 - EP US); **F23D 2900/00014** (2013.01 - EP US); **F23D 2900/00015** (2013.01 - EP US); **F23R 2900/00002** (2013.01 - EP US)

Citation (applicant)

US 5370525 A 19941206 - GORDON CHARLES E [US]

Cited by

EP2818798A1; US9625145B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2366951 A2 20110921**; CN 102213424 A 20111012; JP 2011202946 A 20111013; RU 2010110031 A 20110927; US 2011225948 A1 20110922

DOCDB simple family (application)

**EP 11158147 A 20110314**; CN 201110076922 A 20110318; JP 2011082256 A 20110316; RU 2010110031 A 20100318; US 201113036040 A 20110228